



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 1

**5 Post Office Square, Suite 100
BOSTON, MA 02109-3912**

July 15, 2010

W. Michael Sullivan, Director
Rhode Island Department of Environmental Management
235 Promenade Street
Providence, RI 02908-5767

Re: Review and Action on Water Quality Standards Revision

Dear Mr. Sullivan,

By letter of May 15, 2009, the Rhode Island Department of Environmental Management (RIDEM), submitted revisions to its surface water quality standards for United States Environmental Protection Agency (EPA) review. The revisions, by statute, were adopted and became effective June 2, 2009, and were certified on May 27, 2009 by RIDEM's Legal Counsel as having been duly adopted pursuant to state law. By letter of April 8, 2010 EPA approved three of the four revisions and identified one portion of the submittal that was still under review. EPA has completed its review of the remaining revision.

Pursuant to Section 303(c)(2) of the Clean Water Act and 40 CFR Part 131, I hereby approve the following water quality standard revision:

- the amendment to Table 1 of Appendix B of the Regulations to include site specific dissolved copper criteria for the Blackstone River, Ten Mile River (including the run-of-the-river impoundments) and Woonasquatucket River from the Smithfield WWTF discharge to the confluence with the Moshassuck River.

RIDEM adopted site specific freshwater acute and chronic dissolved copper criteria of 20.41 µg/L and 14.45 µg/L, respectively, based on a water-effect ratio (WER) of 2.92 applied to EPA's CWA Section 304(a) copper criteria at a hardness of 50 mg/L. The site-specific criteria were adopted for 10 water body segments in the Blackstone, Ten Mile, and Woonasquatucket Rivers determined by RIDEM to have an instream flow comprised of 20 percent or greater treated municipal wastewater at instream low flow (7Q10) conditions. All of the segments are affected by discharges from wastewater treatment plants in Massachusetts, Rhode Island, or both.

The WER of 2.92 adopted by RIDEM is the same as that adopted by the State of Connecticut on April 8, 1997, for specific waterbodies with an instream flow comprised of 20 percent or greater treated municipal wastewater at instream 7Q10 flow conditions. Connecticut generated WERs for relatively unimpaired reference sites across Connecticut. Connecticut's work generally followed EPA's WER procedure, "Interim Guidance on Determination and Use of Water-Effect Ratios for Metals," USEPA, February 1994, which is intended to yield site-specific criteria that provide the same level of protection as intended by EPA's national criteria guidance. The procedure can be used to account for local physical and chemical water quality characteristics that EPA recognizes as influencing the toxicity of a metal, making it more or less toxic than predicted by the national CWA Section 304(a) criteria guidance. After review of the supporting documentation Connecticut submitted by letters of April 12, 1996 and May 28, 1997, including "Derivation of Site-Specific Dissolved Copper Criteria for Selected Freshwater Streams in Connecticut," EPA approved

Connecticut's adoption of the site-specific criteria on October 20, 1997. Connecticut's analysis indicated criteria based on the reference site WERs were expected to provide conservative protection of designated aquatic life uses when applied to the waters that contained 20 percent or greater treated municipal wastewater at 7Q10 instream flows.

In utilizing Connecticut's work, RIDEM documented that the general water chemistry in the segments where it adopted the criteria is consistent with the water chemistry of Connecticut's waters where the site-specific criteria were applied ("Documentation to Support Amendments to the Water Quality Regulations (July 2006)" dated May 2009). With consideration of Connecticut's analysis and RIDEM's documentation supporting the transferability of Connecticut's work to select waters of Rhode Island, EPA's approval is based on a determination that the site-specific criteria will be protective of existing and designated aquatic life uses, consistent with EPA's WER guidance. EPA has also approved site specific dissolved copper criteria based on a WER of 2.92 for upstream Massachusetts reaches of the Blackstone and Ten Mile Rivers, as described in EPA's letter to Massachusetts Department of Environmental Protection (MassDEP) dated March 26, 2007. As EPA, RIDEM and MassDEP continue to monitor surface water quality and wastewater treatment discharges in the Ten Mile, Woonasquatucket, and Blackstone Rivers, if water chemistry or treatment plant operations along the rivers indicate potential conditions for greater dissolved copper toxicity, EPA will work with RIDEM and MassDEP to reevaluate these criteria.

EPA's approval of Rhode Island's surface water quality standards revision does not extend to waters that are within Indian territories and lands. EPA is taking no action to approve or disapprove the State's revision with respect to those waters at this time. EPA will retain responsibility under Sections 303(c) and 303(d) of the Clean Water Act for those waters.

We look forward to continued cooperation with Rhode Island in the development, review and approval of water quality standards pursuant to our responsibilities under the Clean Water Act. Please contact Ellen Weitzler (617-918-1582) if you have any questions.

Sincerely,



Stephen S. Perkins, Director
Office of Ecosystem Protection

Cc: Alicia M. Good, RIDEM
Angelo Liberti, RIDEM
Connie Carey, RIDEM
Tom Chapman, USFWS
Mary Colligan, Protected Resources, NMFS
Peter Colosi, Habitat Conservation Division, NOAA
Rick Dunn, MassDEP
Kim Groff, MassDEP
Danielle Fuligni, EPA SSB
Steve Winnett, EPA